



# As If Poetry: Computer-Generated Tanka and Contemporary Japanese Verse

**ARTICLE** 

**SCOTT MEHL** 





## **ABSTRACT**

This paper discusses the innovative use of AI computer algorithms in the creation of tanka, a form of Japanese poetry. From the recent forays into computer-generated poetry in Japan, I look at two computer programs in particular: the instant tanka generator "Inu-zaru," created by Sasaki Arara, and the "gūzen tanka" Twitter bot by programmer Inaniwa. These programs engender new paradoxical models of technology-mediated authorship and reading, whereby human agency is at once subtracted from the composition process while also being presupposed as a necessary component in the participant reader. Such forms of reading and writing shed new light on theoretical matters such as the death of the author even as they pose intractable questions concerning international copyright conventions.

## CORRESPONDING AUTHOR:

## Scott Mehl

Colgate University, US smehl@colgate.edu

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Mehl, Scott. 2021. "As If Poetry: Computer-Generated Tanka and Contemporary Japanese Verse." *ASIANetwork Exchange* 28(1), pp. 36–44. DOI: https://doi.org/10.16995/ ane.8145 AI literature—which is what I will call the body of literature written using text-generating computer programs—was given a publicity boost in March 2016 when tech-oriented news outlets in "more than ten languages" reported that a computer-generated short story had passed the first round of judging for the Hoshi Shin'ichi Prize, a sci-fi competition in Japan (Satō 2016b, 174-76).1 The annual Hoshi Shin'ichi Prize is named after the noted short story author Hoshi Shin'ichi (1926-97), whose daughter, Marina Hoshi Whyte, had asked that the prize competition's second iteration, in 2014, be made open to non-humans, such as aliens and artificial intelligences (Flood 2014). In the competition's third iteration, in 2015, eleven stories written with the assistance of computer programs were entered—under fanciful *noms* de plume—and one of those stories passed the first round of judging (Satō 2016a, 31). In November 2016, the supervising programmer on the team responsible for the story in question, Satō Satoshi, published a book (2016b) about how the team's computer-generated stories were written: his research team had created a program to generate story-like outputs. But what is a story-like output? What, in other words, is a story? Satō's book addressed these concerns directly, for it explained his own understanding of what it means to be an author, to create fictions, and to use language.

We will come back to Sato's story below; for now, I would like to broach the wider questions this essay will address while also making an explicit connection to themes of global geopolitics. Artificial intelligence (AI) remains a highly visible topic in the news, and the reasons for that visibility are multiple. Some observers, expecting that economic advantages will accrue to those who have access to advanced AI, are closely watching present trends in investment in AI-related projects. Governments, too, are paying attention to these trends, as evidenced by the Japanese National Diet's approval in May 2018 of a revision to Japanese copyright law that expanded the defined range of legal uses of text and data mining technologies—technologies that are essential, at present, for most AI applications (EARE 2018). (I will have more to say below about copyright law as it relates to AI in a different context.)

Part of the background for the Diet's decision is the popular perception, in Japan and elsewhere, that China is outspending Japan on AI development. Online sources in both English and Japanese have observed, in tones that vary between admiration and alarm, that there has recently been a concerted push in China to match the United States, which most commentators recognize as the leader in AI development (Simonite 2019a, 2019b). The 2018 Japanese copyright law revision came about because Japan "is facing serious competition from its neighbour, China," as one source put it (EARE 2018). Certain Japanese policy documents have remained nonspecific, however, by not naming Japan's competitors

in the field of AI, whether in Asia or elsewhere: for instance, the Abe Shinzō government's Fifth Science and Technology Basic Plan, issued in 2016, states that "[e]ven if resources related to AI are concentrated in a specific country, we must not have a society where unfair data collection and infringement of sovereignty are performed under that country's dominant position" (Council for Science, Technology and Innovation [2016?], 9).<sup>2</sup>

The previous paragraphs have regarded AI using a political lens, but there are other perspectives available. For some observers, the reason for their interest in AI lies in its sheer novelty: the creation of a self-aware AI will constitute, for such observers, an inflection point in the history of consciousness. For others, the proliferation of AI may end up resembling the introduction of an invasive species into a fragile ecosystem: some are concerned, for instance, that AI will perform jobs that are now done by human beings, potentially causing social and economic upheavals—there will be, as physicist Max Tegmark (2017, 19) succinctly puts it, "winners and losers" as humans continue developing applications for AI. These concerns have been raised even about forms of writing such as translation, journalism, and creative writing.3 Nonetheless, for the time being, it seems that humans will not be outsourcing their poetry compositions to computers anytime soon: the problems involved in programming a computer to write a poem autonomously, working with its own material and writing of its own accord, have so far proven too difficult for human brains to solve. The only kind of sentience that creates what human beings recognize as literature remains, for now, sentience of the organic, human variety.

But one could argue that it is not necessary to recreate sentience in computer code; it is sufficient, one might claim, to provide the illusion of sentience. As Vassilis Galanos and Mary Reisel (2020, 145) have written, robot pets have already begun to serve as "[a]rtificial companions"—think of the pet robot dog AIBO—in a possible indication of things to come.4 This kind of conditional engagement can be transposed onto the experience of literature as well. The very act of regarding a text as if it had been written by a being with human-like sentience has become, in my view, one of the principal attractions of AI literature, and it is this as-if thinking that I wish to explore in the present essay, both for what it reveals about certain long-running questions about literary theory and for how it unsettles certain questions about authorship as a legal matter.

Turning the notion of the information society (or  $j\bar{o}h\bar{o}ka$  shakai) on its head, theorist Ōtsuka Eiji (2016) has examined AI narratives as outgrowths of what he calls an emotion society (or  $kanj\bar{o}ka$  suru shakai). Several decades ago, the information society had enthusiastic proponents: the sociologist Yoneji Masuda, for one, published a template for creating a Computopia, a computer-facilitated "universal society of plenty" (1980,

46). When describing this hypothetical society based entirely on the easy flow of information, Masuda had little to say about human feelings; when he did mention feelings, he called them forms of "affective information," the kind of information created by "novelists, composers, singers, painters, … [t]heater troupes, [and] orchestras" (89). The spread of computing devices would lead, Masuda predicted, to a boom in creativity—yet also to a waning of "arts industries" (90). Everything would be expressed as information; all would be rationalized. *Computopia* contains the word *utopia*, and for good reason.

Masuda had looked forward to an information society, but instead what came about, in Ōtsuka's view, was an emotion society. On the topic of *jōhōka* or informatization (referring especially to computerization), Ōtsuka, writing some thirty-five years later than Masuda (but without mentioning the latter's writings directly), observed that no great rationalization occurred, even in those spheres of human culture in which computing devices had become seemingly omnipresent. Instead of flows of information, Ōtsuka argued, it was rather flows of sentiment that had proliferated with the increase in computer-mediated human interaction (2016, 74–75). Although Ōtsuka's theory made no explicit claim to society-wide applicability, his analysis of the emotion society's impact on written Japanese encompassed a broad range of recent literary and online phenomena, from the novels of Murakami

Haruki and Nakagami Kenji to chatbots such as Rinna (depicted as a female high school student, created by Microsoft Japan for the Twitter and LINE platforms) and Tay (a Twitter chatbot, taken offline for posting offensive comments). Ōtsuka looked forward, he claimed, to a time, possibly in the near future, when emotional labor would be entrusted to AIs and other devices: if robot dogs are consoling human beings today, AI authors will be writing emotionally satisfying stories tomorrow (75-76). Alluding to Roland Barthes's famous essay "The Death of the Author" (1977, 42-48), Ōtsuka predicted that with the rise to prominence of AI literature, the (human) author would finally and truly be dead—which is something that Ōtsuka claimed he wanted to see "not just in a theoretical discourse [hihyōteki na giron] but as a historical event" (Ōtsuka 2016, 264).

Recent Japanese explorations of AI poetry and fiction have not done away with human authorship, however. They have, if anything, called renewed attention to the question of authorship. Consider the Instant Tanka Generator "Inu-Zaru" webpage.

A user who accesses the site is greeted by an image of what appears to be a computer monitor or perhaps a small handheld device with a rectangular display; five tanka appear on this display (*Figure 1*).<sup>5</sup> After the final word of each tanka, there is a clickable Twitter icon, and at the lower right of the nested display appears the name Hoshino Shizuru in parentheses (more about this below). Beneath

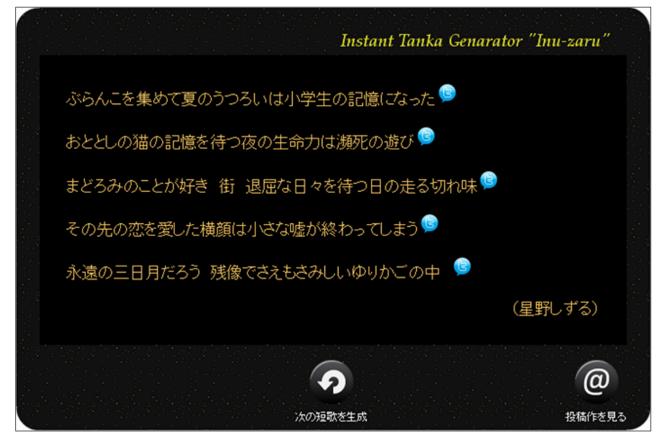


Figure 1 Five tanka by Hoshino Shizuru on the Inu-zaru website.

the display, in the frame that surrounds it, there are two clickable buttons, one labeled "Create More Tanka" and the other "See Generated Texts" (Sasaki A., n.d.). Clicking on the former button will cause five new tanka to appear in place of the previous batch. As is indicated by the explanation beneath the display (not pictured above, but visible on the website), the tanka generator draws on a bank of 530 words (230 substantives, 150 modifiers, and 150 predicates) and randomly rearranges them according to 20 fundamental patterns. A user who clicks the "Create More Tanka" button several times will indeed recognize recurring phrases.

The Inu-zaru site generates tanka, but it also generates questions about authorship at every turn. The site's address is sasakiarara.com/sizzle/ and, as such, it incorporates the name of the programmer, who goes by Sasaki Arara—and who is, one could argue, the real author of every possible output, since he is the one who determines the words and phrases that the program rearranges (to say nothing of creating the program itself).6 The word sizzle in the site's address also relates to the matter of authority, but in a different way. As the text at the bottom of the webpage explains, the Inu-zaru site "requests your cooperation in giving these poems the byline 'Hoshino Shizuru.'" Shizuru is a Japanese pronunciation of the word sizzle. So, while the user's contribution is crucial—it is the user, after all, who must click on the "Create More Tanka" button the user is nevertheless asked to pretend to be a noncontributor and to instead attribute the generated tanka, if attribution ever be made, to a heteronym—in other words, to a fictive author.

The Inu-zaru site, the "Instant Tanka Generator," thus relies on a collaboration between the programmer and the user. But it asks the user to cooperate in erasing the collaborative nature of the composition by attributing the tanka outputs to Hoshino Shizuru—to cooperate in upholding a pretense that is nevertheless perfectly transparent. The user does not create the website itself; the site is presented as being Sasaki's creation, no question about it. Similarly, there is no doubt that the user's only immediate contribution to the composition of the tanka is the mere click of a button. On his own blog, Sasaki has written, "I'm proud of how extremely elegant [monosugoku tanjun] the [Inu-zaru] system is, but hardly anyone gives me any credit for it"—a statement of dissatisfaction that appears only after a sample of accolades the site has received.

Regardless of Sasaki Arara's perception that the Inu-zaru program has been seldom praised, the tanka of Hoshino Shizuru have not gone unnoticed by contemporary poets. Masuno Kōichi, himself a tanka poet, gave the seventh annual (cheekily named) Masuno Kōichi Tanka Prize to Hoshino Shizuru via his blog in September 2009. In a roundtable discussion between tanka poets published in the journal *Tanka kenkyū* in December 2016,

Homura Hiroshi described the Inu-zaru tanka generator as posing "the problem of selfhood in tanka" (tanka no shisei no mondai), while Saigusa Takayuki described such computer-generated tanka as being "bound up with something like the foundations of a first-person poetic form" (ichininshō shikei no konkyo) (Sasaki Y. et al. 2016, 24–25). It is telling, and I think altogether unsurprising, that tanka poets would characterize the Inu-zaru Instant Tanka Generator as raising questions about the self: personhood is assumed to be relevant. As indeed it is: Hoshino Shizuru never composes a poem without the intercession of a human user; the Inu-zaru program was written by a human programmer; and only human critics, at present, can launch critical discussions.

The paratextual fiction that Sasaki Arara asks users to co-create contains many layers that need to be unpacked and examined. But one of the main features of that elaborate paratext, in my view, is its as-if thinking. I will venture a comparison: the as-if thinking that is encouraged by AI poetry has a structure analogous to that of ideological self-deception. I am thinking here, in particular, of a description of ideology given by Slavoj Žižek in The Sublime Object of Ideology (1989). In that text, Žižek claimed that a view of ideology articulated in Karl Marx's writings had become outmoded. For Marx, an ideology was something that led to situations in which subjects "do not know it, but they are doing it," in Žižek's very summary paraphrase (1989, 29). Writing for what he regarded as a more cynical moment in history, Žižek amended Marx, proposing that ideology in the late twentieth century led to situations in which subjects "know very well how things are, but still they are doing it as if they did not know" (30). Žižek's "they" are jaded, or perhaps are merely resigned to situations which they feel powerless to change, so my invocation of Žižek here may be unexpected. Moreover, Žižek's theoretical angle is obviously different from mine, as is his overall argument. But it seems to me that the readers who seek out computer-generated texts do so because they enjoy imagining that the outputs were actually written by humans, without algorithmic mediation; in other words, when approaching an AI text, the users already imagine a flesh-and-blood Hoshino Shizuru, whether or not they are asked to do so (which raises the possibility that Sasaki Arara is engaging in satire on his website). These users, I would hazard, hope to encounter, paradoxically, (what strikes them as) an authentic feeling: for such readers, algorithmically authored texts are preferable because texts that are written in the old way, by human beings, convey affects that are all too familiar. The saying from Terence—"Homo sum, humani nihil a me alienum puto" (I am human, I think nothing human is alien to me) becomes a curse for those who seek the shock of the new, the shock of the unfamiliar.

Defamiliarization is the term of art for describing cases such as the Inu-zaru website. But it is a new sort

of defamiliarization, inasmuch as it combines aleatoric poetics, an interactive online interface, and the tanka form.<sup>7</sup> Another variety of AI poetry relies on a rather different technique of defamiliarization: presenting prose as poetry. A programmer who goes by the name Inaniwa created a program to comb through the Japaneselanguage pages of Wikipedia, searching for strings of prose that, by sheer chance, fit the 5-7-5-7-7 syllable pattern of tanka. Hence the designation that was coined to describe these poems: gūzen tanka 偶然短歌, "tanka by coincidence." This program was launched as a Twitter bot under the handle @g57577 in late 2014, and within two months the bot had some 30,000 followers (Ogawa 2015). In 2016, Inaniwa teamed up with the haiku poet Sekishiro to publish an anthology of 100 of these tanka; Sekishiro provided commentaries on the poems.

Here is an example of one of those 100 *gūzen* tanka, from the Japanese Wikipedia page about Pluto, formerly designated as a planet:

正しいが、人々が持つ宇宙への夢に対する配慮に 欠けた

tadashii ga, / hitobito ga motsu / uchū e no / yume ni taisuru / hairyo ni kaketa

although it was true, it lacked consideration for people's fantasies about outer space (Inaniwa and Sekishiro 2016, 42)

Here is Sekishiro's commentary:

This tanka is drawn from the words of Matsumoto Leiji on hearing that Pluto had become a non-planet.

Incidentally, the phrase "lacked consideration for people's fantasies" brings back a childhood memory.

In the years 1965–75, when I was still little, I believed in Santa Claus. My mother wanted to surprise me, so when she saw that one of the toy stores in our small town had a service called "Have Santa Deliver Your Present!," she applied. How amazed I would be when Santa Claus showed up with a present on the night of the twenty-fourth, she thought.

But it was in the middle of the day on the twenty-third when I heard someone knocking at the door. "It's Santa," said some old man from the toy store. An old man who lacked consideration for other people's fantasies. The only "Santa" thing about him was his red hat. (Inaniwa and Sekishiro 2016, 43)

Matsumoto Leiji, as the Japanese-language Wikipedia page about Pluto explains, is a noted director of anime films. The tanka quoted above was extracted from a slightly longer comment by Matsumoto that appears on the page about Pluto; being (apparently) prose, the comment does not strike a casual reader as containing a tanka. Nor, one presumes, did Matsumoto craft his comment for poetic effect.<sup>8</sup>

Here again the question of authorship arises, posed from yet another angle. That the original text appears in the Wikipedia entry for Pluto is not in question; and assuming the attribution to Matsumoto is correct, we can even ascribe a name to the person presumed to have uttered the words (the text is still available as-is on Wikipedia as of July 2019). But without the Twitter bot, it is highly unlikely that any reader would have noticed that a part of Matsumoto's comment could be read as a tanka. It hardly needs to be stated, but context matters: in the absence of conventional cues (typographical offset, attribution to a known poet, publication in a poetry journal, etc.), one could argue that a syllabic sequence of 5-7-5-7 is not (necessarily) a poem. Or, to put it differently: a sequence of words that happens to follow a 5-7-5-7-7 syllable pattern might be a poem, but it also might not be one. To quote Homura Hiroshi again, a tanka like the one found in the Wikipedia entry on Pluto "is a passage drawn from a text written by a human, without a doubt; but the writer had no consciousness whatsoever of [having written] that tanka" (Sasaki Y. et al. 2016, 24). In his afterword to the Gūzen tanka anthology, Sekishiro offered the following reflection on the question of the poems' authorship:

[T]he gūzen tanka are created automatically, using a program. In that sense they are digital. But the texts from which they are drawn were written by somebody, and in that sense they are analog. When I was reading [the tanka] with that in mind, I decided it didn't matter whether they were tanka or not, or whether they were digital or analog. After all, these thirty-one-syllable texts that the program found stimulated my imagination. (Inaniwa and Sekishiro 2016, 216)

Sekishiro incorporates a bit of as-if thinking here, too: he has the option to read the texts as tanka, or not; he claims to be indifferent to provenance, so long as the texts are "stimulat[ing]." "I decided it didn't matter": one can take this statement with a grain of salt, since it is advantageous to Sekishiro to adopt a position of agnosticism about the authorship of the texts. In Sekishiro's view, the as-if thinking that I am describing becomes merely one interpretive angle among many. For Sekishiro, the better hermeneutic approach to any text is the one that gives the reader a greater surprise: the English title that appears on the cover of Sekishiro and Inaniwa's book is *Unexpected Tanka*, and the word "unexpected" gets at the heart of the matter (*Figure 2*).

Kwame Anthony Appiah, a philosopher whose recent book *As If* (2017) has shaped my views on this subject,

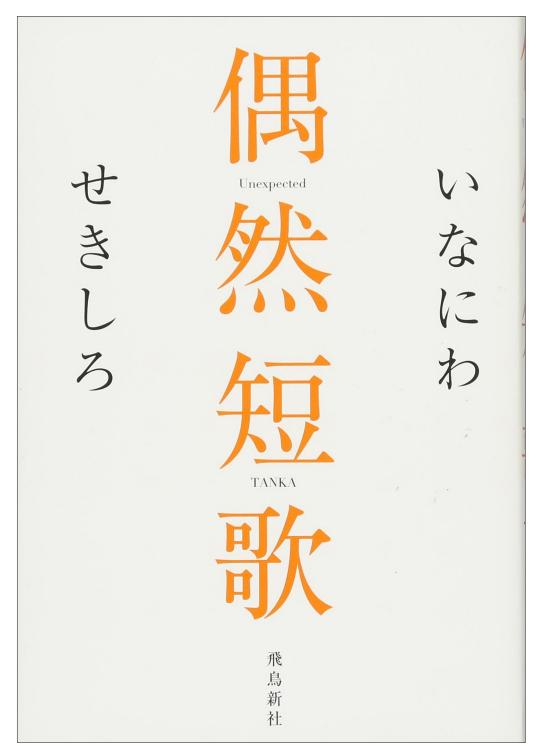


Figure 2 The cover of Inaniwa and Sekishiro's Gūzen tanka (2016).

writes that such as-if thinking is an intrinsic aspect of a human being's "appropriate" response to fictional events. In the following passage, Appiah is qualifying the precise difference between reacting to a real tragedy and reacting to a fictional (staged) tragedy:

[N]ormally when I am sad, it is because I believe that something regrettable has really happened; but when Ophelia "dies," I am never in any doubt about whether an actual person has died. In one sense, then, it is never true that drama involves

what Coleridge called a "willing suspension of disbelief."

My sadness at Ophelia's "death" involves not an abandonment of the belief that no one has died, but abandonment of one of the normal consequences of that belief, which would be (other things being equal) that I had nothing to be sad about. That's what it is to permit myself to feel as if someone had died. We do not need to deny that this feels like real sadness, sadness about an actual regrettable event. But it differs from that

feeling in not being associated with the kind of belief that normally makes sadness intelligible. What is suspended is not disbelief but the normal affective response to disbelief. I am reacting—but only in some respects—as if I believe an unhappy young woman has died. Someone who didn't have an appropriate response to the real event wouldn't have an appropriate response to the fictional one either. (Appiah 2017, 108; emphasis in original)<sup>9</sup>

With AI literature such as the verses we have seen above, as-if thinking focuses less on the content of the texts than on what linguist Émile Benveniste (1971, 218) would call their instance of discourse—the situation in which the texts are produced. In the case of the gūzen tanka quoted above, it's not that a reader is imagining a fictional character with this or that fantasy about outer space; rather, the reader is being asked to imagine that an actual human being saw fit to write such a poem, on such a topic, in such a form. The perceived mismatch between the tanka's form and its content is assuredly part of the point.

The ambiguous nature of the authorship of AI texts has occasioned legal questions: How is an AI author similar to, and different from, a human author? What copyright conventions should apply to texts generated by AI? Writing about the United States legal context, Margot E. Kaminski has applied the lenses of copyright law and First Amendment law to what she calls "algorithmic authorship" (2017, 589). Kaminski considers in detail the effects of "emergence" in computer program outputs: how should the law regard "outputs their programmers and users could not predict" (593)? As Kaminski concludes, "It may be surprising, in both copyright and First Amendment law, that authorship does not center around humanness" (614)—a point that had been taken for granted (understandably, I would say) in previous legal treatments of authorship. "While algorithmic authorship may make that quality [i.e., humanness] visible—or salient—it did not cause or create that feature of the law," Kaminski adds: rather, "[i]t has been interpreted into it" (614–15). Writing on a related concern about the law and robotics, Ryan Calo has written that "we may be on the cusp of creating a new category of legal subject, halfway between person and object. And I believe the law will have to make room for this category" (2015, 549)—in other words, to adapt and create laws about what is permissible in interactions between humans and AI.

The above statements were written in and about the United States legal context, but international conventions are what will shape how AI literature circulates globally. The Berne Convention, for example, is a principal international agreement on matters pertaining to copyright; Japan has been a signatory since 1899. How the Internet has affected copyright conventions is a large topic, one on which I am loath to trespass, but Calo

(2015, 518–25) has surveyed the issues accessibly. I will observe that the AI poetry I have mentioned draws on existing conventions to facilitate the poems' circulation. The tanka generated by the Inu-zaru website come ready for instant citation on a user's Twitter account—the texts are made to be shared. As for the  $g\bar{u}zen$  tanka mined from Wikipedia, the anthologists Inaniwa and Sekishiro are careful to include a disclaimer about their reuse of the text: in a one-page statement near the end of their anthology, they state that their project is provided for by the Creative Commons Attribution-ShareAlike 4.0 International license (Inaniwa and Sekishiro 2016, 223).

How the competing claims of readers, programmers, non-programming authors, and (eventually?) AI themselves will be adjudicated is a question for the future. National borders and the absence of an international copyright law—there are only international conventions on copyright—further complicate the picture. To return to the story that made it past the first round of judging for the Hoshi Shin'ichi Prize, I mentioned above that various publications made much of the news, as Satō Satoshi himself acknowledged with evident pride. But in a moment of querulousness about how the story itself had circulated, Satō made the following observations:

No official English translation of "Konpyūta ga shōsetsu o kaku hi" exists [as of 2016], but somehow the title came to be "The day a computer writes a novel" [in English in the original], and the beginning and end of the story have appeared in English. As for the translations into Korean and Chinese, those are quite lengthy [yori nagai mono ga arimasu]. I have no wish to make a big deal about it, but I wonder whatever became of copyright (translation rights) [Mekujira o tateru tsumori wa arimasen ga, chosakuken (hon'yakuken) wa dō natteiru no deshō ka]. (Satō 2016b, 175–76)

When Satō published his book about how his computer-generated stories were written, the texts of the stories themselves were included, albeit in a special section in the middle of the book, with the pages still joined, unopenable, at the fore edge—presumably, only those readers who purchased the text would then be able to take the book home, cut the pages, and read the computer-generated stories. I mention this detail because it suggests to me that Satō (or his publisher) was unnerved by the existence of the extensive translations of the story in Korean and Chinese, despite his stated unwillingness to "make a big deal about it." But that was in 2016. As of 2019, the stories are readily available on a webpage maintained by Satō himself.

The present essay, in the end, is not doing anything so pat as taking a position "for" or "against" AI literature. It has surveyed some of the most eye-catching recent Japanese developments in the computer-assisted composition of poems and (to a limited extent) fiction

with the aim of adding to the work done by writers such as Marie-Laure Ryan, Bruce Clarke, Thomas Foster, and others who have laid the foundations for theorizing about such texts. While many commentators are most engaged in making sense of how AI literature is written, my interest is much more in the phenomenology of how AI literature is read. Will we know when we have crossed the threshold between reading AI literature as if it were "just" literature, and reading it as literature? Or will there be a point when that threshold loses all meaning?

#### NOTES

- 1 Satō Satoshi does not specify which "ten or more languages" had internet coverage of his team's story; he only adds that he stopped searching when he found an online article about it in Arabic (Satō 2016b, 176).
- 2 In the 2016 Fifth Science and Technology Basic Plan, the Abe government mentioned its goal to create a Society 5.0, one in which AI plays a much greater role in everyday life. According to one report, the new plan "means that science, technology and innovation (STI) policy has now become a mainstream political agenda" in Japan (UNESCO 2019).
- 3 "Concerns" may not be the best word. Meredith Broussard (2018, 52–53) has written of both the benefits and drawbacks of AI for journalism—although her overall tone is cautionary. Douglas Hofstadter (2018) has written a sharp critique of Google Translate, arguing that what programs lack is "understanding" of languages—a lack that makes it impossible for programs to create translations. Both Broussard and Hofstadter rely on a criterion of "understanding"—does a program understand what it is doing or not?—when gauging the successes or failures of AI.
- When Sony stopped making AIBO dogs, the robots inevitably began to fall into disrepair, and it was no longer possible to find replacement parts. As Jennifer Robertson (2018, 184) has written, some moribund AIBO dogs became "organ donors" for other ailing AIBO dogs, and some humans held funerals for their AIBO dogs when they died.
- 5 Tanka are Japanese poems with a 5-7-5-7-7 syllable (or mora) pattern.
- 6 I say the programmer "goes by" Sasaki Arara because "Arara" is nearly homophonous with a common expression of surprise in Japanese. I stop short of claiming the name is a pseudonym.
- 7 I will be the first to grant that aleatoric poetry is much older than Sasaki's website: witness the Dadaist cut-up method of poetry composition, for example. Even computer-generated Japanese poetry dates to half a century ago: see the "computerized Japanese haiku" of Margaret Masterman and Robin McKinnon Wood from as early as 1969 (Reichardt 1969, 54).
- 8 The Japanese-language Wikipedia page about Pluto gives no source for the comment attributed to Matsumoto.
- 9 Craig Delancey's (2002, 105–11) survey of theories about why humans have emotional responses to fictional events is valuable as an overview of how the science of cognition might overlap with Appiah's philosophical approach.
- 10 Susan Wilson and Cameron Hutchison have written about copyright law comparatively in the United States, Canada, and Japan, finding that "the respective national laws differ little in fields such as the types of works which are to be protected, the types of rights granted to copyright owners, and the duration of copyright protection"—precisely because "all three countries are signatories to the Berne Convention and the TRIPS Agreement, which establish minimum standards of copyright protection" (2009, 246–47; emphasis in original).

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## **COMPETING INTERESTS**

The author has no competing interests to declare.

## **AUTHOR AFFILIATION**

#### Scott Mehl

Colgate University, US

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